

REMARKS

Claims 1 – 32 are pending herein. Claims 12 – 14 and 30 – 32 stand withdrawn from consideration.

Applicants note that the Examiner has made the restriction requirement final.

Applicants respectfully traverse the § 103 rejections of claims 1 – 11 and 15 – 29 as being unpatentable over Hacker et al (US 2003/0186816) in view of various combinations of the secondary references to Koltzenburg et al. (US 2007/0122436), Nabors et al (US 2005/0233907) and Cornes (US 6,924,250).

By way of summary, the problem addressed by the present invention is the provision of a suspension concentrate or suspoemulsion formulation comprising mesotrione which exhibits improved physical storage stability, handling and in particular dilution characteristics. This problem is solved by the present invention by providing such a formulation wherein the mesotrione therein has an average and median particle size of less than 1 micron.

As noted by the Examiner, Hacker et al. (Hacker) relates to 3-way (component A, B and C) herbicide combinations comprising specific sulfonylurea herbicides. It is mentioned that component C may be one of 57 compounds, of which mesotrione just happens to be one (compound C8). Hacker further discloses that the herbicidal composition may (amongst others) be provided as a suspension concentrate (SC) or a suspoemulsion (SE). However, there is no specific teaching in Hacker of a suspension concentrate or suspoemulsion comprising mesotrione.

Koltzenburg et al. (Koltzenburg) relates to a nanoparticulate formulation comprising at least one active compound. Mesotrione just happens to be one of a vast number of the “active compounds” compounds contained within the substantial “boilerplate” provided. In fact - it can be seen from the specific examples provided by Koltzenburg that the invention is primarily directed towards fungicide compositions (paragraph 0059), in particular those comprising pyraclostrobin (paragraph 74). There is no particular focus on herbicides, let alone mesotrione or even sub-micron mesotrione formulations.

Accordingly, one of ordinary skill would have no reasonable expectation that combining the teachings of Hacker and Koltzenburg would provide a suspension concentrate or suspoemulsion formulation comprising mesotrione with improved physical storage stability, handling and in particular dilution characteristics. This is because neither reference is specifically concerned with such formulations.

Although Koltzenburg does make the general point (paragraph 0004) that it is known that solubility, dispersibility and (in particular) bioavailability of active compound particles can be increased by expanding the particle surface area, the dilution characteristics of a herbicidal agent are not specified. Such characteristics within a formulation are not predictable and are governed by rheological behavior of particular formulations (which can be dictated by a number of factors including but not limited to: disperse phase volume, particle size, particle shape, uniformity of particle size distribution, particle surface energy, presence of more than one disperse phase, presence of surfactant(s), presence of humectants, and presence of dispersed polymers) and not necessarily by particle size alone.

Moreover, Applicants respectfully submit that in reaching a conclusion of obviousness, the Patent and Trademark Office must consider the "invention as a whole," which includes evidence of the invention's unexpected results. See *In re Margolis*, 228 USPQ 940 (Fed. Cir. 1986). Specifically, with regard to mesotrione containing formulations, the experiments and data referred to in Table 2 of the description show the redispersion properties of sediment material – and how these are improved when sub-micron mesotrione is used. In the sediment, the particle phase volume is very high and the redispersibility – rather than being governed by particle size per se - is actually governed by the cohesively of the sediment, that is by unpredictable rheological properties. Thus, the technical success achieved cannot be predicted on the basis of the teachings of Hacker and Koltzenburg as these are silent as to the rheological properties of mesotrione formulations.

In summary it is submitted that the problem addressed by the present invention – that is the provision of a suspension concentrate or suspoemulsion formulation comprising mesotrione which exhibits improved physical storage stability, handling and in particular dilution characteristics – is not obvious in view of Hacker and Koltzenburg. Neither reference is specifically concerned with

mesotrione formulations – and thus provides no teaching regarding the formulation properties of this particular herbicide that would motivate the skilled person to combine them. It is only with the benefit of hindsight that the Examiner has chosen to mosaic the teachings of either document in the manner suggested in order to arrive at the present invention.

The secondary references to Nabor and Cornes also do not remedy the deficiencies of Hacker.

In view of the above remarks, Applicants submit that the present claims are allowable over the cited art. Withdrawal of all rejections is respectfully requested, along with issuance of a Notice of Allowance. Applicants invite the Examiner to telephone the undersigned attorney of record if the Examiner feels that the call will be beneficial to advance prosecution of the application.

Respectfully submitted,

USPTO Customer No. 26748
Syngenta Crop Protection, Inc.
Patent and Trademark Dept.
410 Swing Road
Greensboro, NC 27409
(336) 632-7895

/William A. Teoli, Jr./
William A. Teoli, Jr.
Attorney for Applicants
Reg. No. 33,104

Date: November 5, 2008